

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
24 June 2004 (24.06.2004)

PCT

(10) International Publication Number
WO 2004/052886 A1

(51) International Patent Classification⁷: **C07D 417/12**,
A61K 31/433, 31/4245, A61P 43/00, C07D 413/12

Schepp-Allee 47, 64295 Darmstadt (DE). **BARTOSZYK, Gerd** [DE/DE]; Kreuzstrasse 57, 64331 Weiterstadt (DE). **SEYFRIED, Christoph** [DE/DE]; Mathildenstrasse 6, 64342 Seeheim-Jugenheim (DE).

(21) International Application Number:
PCT/EP2003/012810

(74) Common Representative: **MERCK PATENT GMBH**;
Frankfurter Strasse 250, 64293 Darmstadt (DE).

(22) International Filing Date:
17 November 2003 (17.11.2003)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
02027483.3 10 December 2002 (10.12.2002) EP

(81) Designated States (*national*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(71) Applicant (*for all designated States except US*): **MERCK PATENT GMBH** [DE/DE]; Frankfurter Strasse 250, 64293 Darmstadt (DE).

(84) Designated States (*regional*): ARIPO patent (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

(72) Inventors; and

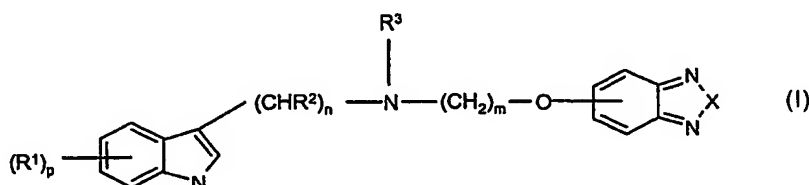
(75) Inventors/Applicants (*for US only*): **HÖLZEMANN, Günter** [DE/DE]; Gutenbergstrasse 6b, 64342 Seeheim-Jugenheim (DE). **CRASSIER, Helene** [FR/DE]; Sandstrasse 30, 64331 Weiterstadt (DE). **BÖTTCHER, Henning** [DE/DE]; Stiftstrasse 12, 64287 Darmstadt (DE). **HEINRICH, Timo** [DE/DE]; Römerhofstrasse 6, 64823 Gross-Umstadt (DE). **SCHIEMANN, Kai** [DE/DE]; Mühlthalstrasse 50, 64297 Darmstadt (DE). **LEIBROCK, Joachim** [DE/DE]; Mühlstrasse 91A, 64319 Pfungstadt (DE). **VAN AMSTERDAM, Christoph** [DE/DE];

Published:

— with international search report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: INDOL DERIVATIVES AND THEIR USE AS 5-HT LIGANDS



(57) Abstract: The invention relates to indol derivatives of Formula (I) in which R1, R2, R3, X, A, n, m and p have the meanings indicated above.